

Notice of Allowability	Application No.	Applicant(s)
	10/007,904 Examiner	FETTERMAN ET AL. Art Unit
	Evan Pert	2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to the amendment filed December 1, 2003.
 2. The allowed claim(s) is/are 1-41.
 3. The drawings filed on 27 June 2003 are accepted by the Examiner.
 4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All
 - b) Some*
 - c) None
 of the:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) The translation of the foreign language provisional application has been received.
 6. Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**
7. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 8. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) hereto or 2) to Paper No. _____.
 - (b) including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).
9. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <input type="checkbox"/> Notice of References Cited (PTO-892) | <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____. |
| <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No. _____ | <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | <input type="checkbox"/> Other |

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-41 are allowed [per items 8 and 9 of the Office Action mailed 9-30-03].

Response to Arguments

2. Applicant traverses rejections of record of claims 42 and 43 (claims added in response to a previous Office Action). Rather than wait for a response regarding the traversal, applicant chose to cancel claims 42 and 43 "solely to expedite the prosecution of the present application" [p. 10, response filed December 1, 2003].

Applicant's traversal of the rejections of claims 42 and 43 is unfounded, unconvincing and misleading. Applicant inaccurately hypothesizes:

...it appears that the TiN/Al-Si-Cu interconnects of Hoang, relied on by the Examiner, comprise a *single conductive path* and not parallel conductive paths of different impedances as claimed. [p. 10, response filed December 1, 2003, emphasis added].

To one of rudimentary skill in the art, Hoang et al. *clearly* describes a *multi-layer* interconnect line test structure with "TiN" (i.e. a first conductive material inherently having a first conductivity) underlying "Al-Si-Cu" (i.e. a second conductive material inherently having a second conductivity differing from the first conductivity of the TiN).

In their "Executive Summary," Hoang et al. refer to "TiN" as a kind of "barrier metal" located *under* the main metal (e.g. under "metal-1" in Hoang et al.) so that the final interconnect takes the form of a laminate-like layer of "TiN" under a layer of "Al-Si-Cu." Thus, the "/" (i.e. the "slash") between the "TiN" and the "Al-Si-Cu" means they are distinct layers, not an entire alloy of TiN-Al-Si-Cu. This "slash" (/) nomenclature is notoriously well known to those of ordinary skill in the art of making a multi-layer interconnect line having a barrier metal.

Undisclosed Related Application

3. Applicant is reminded of the duty to disclose pertinent information in every patent application in accordance with the applicable laws and rules that require such disclosure, including disclosure of related co-pending applications.

In the instant case, Serial Number 10/007,417, filed by applicant on the same day, is clearly related and relevant, but was seemingly filed independently without reference to the instant case. This type of practice of filing related claims without notifying the office can result in double-patenting problems and redundancy among personnel within the office. While the practice of redundant filing may increase applicant's odds of simply generating "a patent," the practice should be avoided because it can result in poor quality patents that could be invalidated by applicant's competitors.

In the instant case, at the time of this writing, the examiner could tell that 10/007,417 was allowed, but did not have access to the claims or prosecution.

Applicant is advised to file a Terminal Disclaimer as a Rule 312 Amendment to obviate the possibility of any double-patenting questions or accusations during the patent term. Alternatively, applicant is advised to file an RCE for continued examination of 10/007,904 to clearly establish patentable distinction between the claims issuing from 10/007,904 and the claims issuing from the prosecution of related 10/007,417.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Pert whose telephone number is 703-306-5689. The examiner can normally be reached on M-F (7:30AM-3:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 703-308-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.

ETP
December 22, 2003



EVAN PERT
PRIMARY EXAMINER